

REMARKS

The present Amendment is in response to the Office Action dated November 6, 2003 in reference to the above-identified application. The Examiner set a shortened statutory period for reply of three (3) months, making the present Amendment due by February 6, 2004. Filed concurrently herewith is a request for a two-month extension of time so that the present Amendment is due by April 6, 2004.

In that Office Action, claims 1-46 were pending. Of these, claims 1-3 and 7-9 were rejected as anticipated by U.S. Patent No. 6,264,229 to Gill et al. under 35 U.S.C. §102. Claims 11, 35-37 and 42-46 were rejected as anticipated by U.S. Patent No. 6,540,246 to Andersen et al. under 35 U.S.C. §102. Claims 4-6 were rejected as obvious over Gill et al. under 35 U.S.C. §103. Claims 14, 15, and 38 were rejected as obvious over Andersen et al. under 35 U.S.C. §103. Claims 16-18, 19-25, 27-31 and 39-41 were rejected as obvious over Andersen et al. in view of Gill et al. under 35 U.S.C. §103. Applicant notes with appreciation the Examiner's indication that claims 10, 12, 13, 26, 32 and 34 contained allowable subject matter.

In addition to these rejections, the drawings were objected to on two grounds. First, the Examiner noted that the numeral "21" mentioned in the description was not found in the drawings. Second, the Examiner indicated that reference character "232" has been used to designate both bores and an adapter at page 19, lines 3 and 14.

Turning first to the drawings, Applicant is concurrently submitting a proposed correction to Figure 2 of the drawings indicating the annular channel 21 on the pin connector 20 to which the pin connecting engaging assembly shown in Figure 7 is to attach. As to the reference character "232", by this amendment, Applicant corrects

the second paragraph appearing on page 19 of the specification. Here, in line 14, the numeral "232" is deleted and is replaced by -collar 212-.

Turning to the claims, Applicant notes that allowable claim 10 has been rewritten and is represented in independent format as newly added independent claim 47. Claim 10 is not, however, been cancelled since independent claim 1 is amended so that the combination set forth in claim 10 and the claims from which it depends is distinct from newly added claim 47.

Since each claim which as been rejected in this application is rejected over either Gill et al. or Andersen et al. taken alone or in combination, it is helpful to review the teachings of each of these references before commenting upon the amendments made herein or other arguments presented in support of the patentability of these claims. However, before commenting on these references, Applicant notes that the present application was filed on March 14, 2002. Gill et al. issued less than one year prior to the filing date of this application. Moreover, Andersen issued over a year after the present application was filed. Applicant is currently investigating records to determine whether the date of invention of the present application precedes the filing dates of either Gill et al. or Andersen et al. for purposes of filing an affidavit under rule 131. While this information has not been fully developed, Applicant reserves his right to enter such affidavit and does not concede that either Gill et al. or Andersen et al. are properly applied as prior art references in the present case. Nonetheless, certain amendments have been made which distinguish the present invention over the cited art.

Turning to the Gill et al. reference, a gooseneck trailer coupler is disclosed wherein a tube 12 telescopically receives a stem 13 with the extension of which being maintained by set screws. A chuck 31 is welded at the lower end of the stem.

This chuck is configured with a ball aperture adapted to mate on a hitch ball. One or more openings 32 are provided in chuck 31, and a specially configured, wedge-shaped jaw 40 is sized to positioned in each of these openings 32. Each jaw 40 has a cam face formed thereon. A ring gear 28 is mounted over the outer surface of chuck 31 and includes pins 30 that are received in slots 50 of chuck 31 so that, when ring gear 28 is rotated, the engagement of the pins and slots of the ring gear 2 longitudinally translate away from and toward the base 33 of chuck 31. When longitudinally translated toward base 33, ring gear 28 attacks the cam face on each jaw 40 to force each jaw 40 radially inwardly of the chuck and hold it into position. When ring gear 28 moves away from base 33, jaws 40 are released so that they move radially outwardly thereby to release a ball element that is captured by the chuck. In order to rotate ring gear 28 so that pins 30 and channels 50 cause it to undergo longitudinal translation, a pinion gear 22 is provided which has gear teeth that mate with gear teeth 29 on ring gear 28. Pinion gear 22 is rotated by means of a handle which may be pivoted outwardly and manually moved. It is important to note, however, that the actuation of jaws 40 is caused by the longitudinal translation of ring gear 28 rather than the rotational movement.

The patent to Andersen et al. also teaches an adapter to mount onto the king pin of a fifth wheel connector and to a gooseneck coupler in a towing vehicle. Here, the adapter includes a top half in the form of a cone-shaped top 3 that threads onto the threads of a split collar 2 that is mounted around the king pin. This top half of the adapter then telescopically receives a mating sleeve 7 which may be locked into position by setscrews 6. A ball coupler 60 is welded into the lower end of sleeve 7 and includes a structure for engaging a hitch ball 14 therein. This structure is illustrated in Figure 1. Here, a latch pin 11 extends transversely of the ball hitch

opening. It may be moved toward the interior of the ball hitch opening and held in position by means of a wedge block 10 that undergoes longitudinal translation to push the latch pin inwardly or to allow the latch pin to freely move outwardly away from the opening to release the hitch ball. This movement is controlled by means of a linear cable actuator 12 and a handle 30 (Figure 2) for activating or releasing the latching mechanism. Here, again, the actuator moves longitudinally of the mechanism.

In reviewing the Office Action, Applicant notes that dependent claim 34 was indicated as containing allowable subject matter. While independent claim 34 related to a plurality of recesses, claim 34 recited that the actuation of the locking elements, here in the form of ball bearings, was accomplished by a locking collar having cam faces such that upon rotation, as opposed to translation, would move the locking elements into position and allow them to move out of locking position.

With this guidance, Applicant has amended independent claims 1, 11, and 19 to include the feature that the locking collar has a recess and a cam face. The locking collar is then rotatably moveable between a first position where the cam face is operative to move the locking element into the locked state and a second position wherein the locking element can be received in the recess. This structure is not shown in any of these cited references. Accordingly, independent claims 1, 11, and 19 are believed allowable.

Independent claim 28 has been amended in a different manner. Here, recitation is made that the locking collar that is rotatably disposed between the retaining ring and the base plate it "constrained thereby against longitudinal movement". Claim 28 has been rejected over Andersen et al. in view of Gill. Andersen et al., however, does not show any rotatable collar. Rather, actuation of

its locking element is by longitudinally translating wedge block 10. While Gill arguably shows a rotatable collar, this collar must translate longitudinally in order to move its locking elements. Gill et al. simply would not function if the locking collar were constrained for rotational movement only. Accordingly, the amendment to claim 28 is believed to distinguish over this combination of references.

Independent claim 35 has been amended to recite that the extension member is an elongated hollow cylindrical tube having a sidewall and two hollow end portions. The second end portion is sized to receive the hitch ball, and a spherical ball bearing is located in the hole formed in the sidewall of the second end portion. The ball bearing moves under the influence of the rotatable collar. This structure eliminates the separate chuck assembly or ball hitch receiver required in Andersen et al. or Gill et al. Thus, the structure is greatly simplified by those elements now recited in claim 35 and provides savings costs of manufacturing over that believed to be required by Gill et al. and Andersen et al. As a result of the amendments to claim 35, claims 36-39 have been cancelled, and the dependency of claims 40 and 41 has been redefined.

Independent method claim 42 has been amended to recite that the method is accomplished by rotating a collar whereby a cam face on the collar moves the locking element into the locked state. Even if Gill is deemed to have a rotatable collar, there are no cam faces on the collar which move the locking element into position. Accordingly, claim 42 is believed allowable for reasons similar to claims 1, 11 and 19. As a result of the amendments to claim 42, claims 43-45 have been cancelled.

With due respect, Applicant disagrees with the Examiner's rejection of certain of the dependent claims. For example, the structure recited in dependent claims 7-9

is simply not shown. In Figure 2 of Gill, for example, it may be seen that the chuck assembly includes base 31, and the locking collar is positioned above the base 31. However, there is no retaining ring disposed on the socket in spaced relation to the base plate. Andersen et al. lacks both the base plate, the locking collar and the retaining ring. As to dependent claim 8, there is no actuator member secured to the collar 28 of Gill et al. Rather, the actuator is a pinion gear that is not secured. Instead, the actuator member is secured to a stub shaft on this pinion gear. Moreover, the structure described in dependent claim 9 simply is not remotely disclosed in either Andersen et al. or Gill et al. The base plate 31 of Gill et al. does not include a flange having a slot, and the actuator is not an elongated rod projecting radially outwardly from and connected to the locking collar with the distal end portion of the rod received in the slot. Accordingly, the structure of independent claim 9 is clearly not shown in any of the cited references.

For these reasons also, Applicant has submitted new independent claim 48. This claim includes recitation that there is an elongated actuator rod that projects radially outwardly from the locking collar. This actuator rod is adapted upon manipulation to move the locking collar between its first and second rotatable positions. This structure is not found in either Gill et al. or Andersen et al. so that claim 48 should be allowed.

Note is also made that dependent claim 12 has been amended to change its dependency from dependent claim 10 to 11 as this was a typographical error the Applicant noted when reviewing these claims for purposes of responding to the Office Action.

Due to this Amendment, a new filing fee calculation is provided, as follows:

Maximum Total Claims This Amendment	Total Claims Previously Paid For	
41	-	46 = 0 x \$ 9.00 = \$0.00
Total Independent Claims Per This Amendment	Maximum Independent Claims Previously Paid +For	
9	-	7 = 2 x \$43.00 = \$86.00

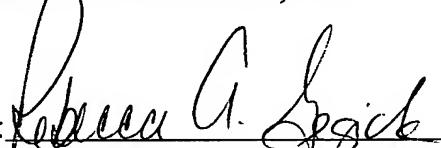
Additional Filing Fee Due \$86.00

Accordingly, our check no. 18266 in the amount of \$86.00 is enclosed. The Commissioner is hereby authorized to charge any deficiency in the payment of the required fee(s) or credit any overpayment to Deposit Account No. 13-1940.

Based on the foregoing, Applicant submits that the present application is in complete condition for allowance, and action to that end is courteously solicited. If any issues remain to be resolved prior to the granting of this application, the Examiner is requested to contact the undersigned attorney for the Applicant at the telephone number listed below.

Respectfully submitted,

TIMOTHY J. MARTIN, P.C.

By: 
Timothy J. Martin, #28,640
Michael R. Henson, #39,222
Rebecca A. Gegick, #51,724
9250 West 5th Avenue, Suite 200
Lakewood, Colorado 80226
(303) 232-3388